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## MICROECONOMIC SURPLUS OR CONVENIENCE IN HEALTH CARE: APPLIED ECONOMIC THEORY IN HEALTH CARE IN THREE EUROPEAN COUNTRIES

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**OBJECTIVES:** In economic theory economic surplus refers to two related quantities: Consumer surplus (monetary gain obtained by consumers because they are able to purchase a product for a price that is less than the highest price they would be willing to pay) and producer surplus (amount that producers benefit by selling at a market price that is higher than the least they would be willing to sell for). Applying the theory to health care economic surplus could be translated as convenience benefits which could be skimmed by patients, physicians or health care payers. **METHODS:** Various areas of economic surplus were being screened and three areas in Germany, the Netherlands and the UK were analysed: Caesarean births, emergency room visits (nights or weekends) and response surplus. A targeted literature search was being conducted to identify the costs. The economic surplus (convenience value) was calculated. **RESULTS:** The economic surplus for non-medical driven Caesarean births was calculated as the difference of a DRG (Diagnosis Related Groups) for a vaginal birth and a Caesarean birth in Germany and was equal to € 828 per case. In the UK emergency visits during nights or weekends were analysed. Standard HRG (Healthcare Resource Group) value for an emergency visit was applied and the theoretical surplus was calculated applying a proxy-add-on taken from the proportionally higher wages during premium times and was ranging between € 94 and € 137 per case for nights shifts and weekends respectively. As an example of response surplus IVF-treatments in the Netherlands were chosen where it can be shown that there might be a patient surplus of up to € 4'096 per saved IVF-treatment. **CONCLUSIONS:** The application of standard economic theory confirms the availability of surplus skimming in health care and shows that health care systems are indirectly accepting and paying for convenience.

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## HEALTH CARE UTILIZATION RESEARCH IN GERMANY: CHARACTERIZATION OF THE NORDBADEN DATABASE

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**OBJECTIVES:** The Nordbaden Project was established in 2003 as a cross-sectional analysis of the administrative prevalence, resource use, and direct medical costs associated with attention-deficit/hyperactivity disorder (ADHD). Meanwhile, the project has evolved into a longitudinal patient-centered study, allowing to follow identified patients over prolonged periods of time and to study the impact of moderators (e.g., coexisting conditions) and mediators (e.g., specialist involvement) on the quality and cost of health care services provided. The database enables retrospective health care utilization studies based upon claims data of the Kassenaerztliche Vereinigung (KV) in Nordbaden ("Regierungsbezirk Karlsruhe"), an affluent region in Southwestern Germany. **METHODS:** The database covers the complete regional population enrolled in statutory health insurance (SHI; >2.2 million lives). Based upon prospective data analysis plans, the vdek group of sick funds within SHI (850,000 lives in year 2009) offers prescription data for the subsample of patients insured by its member companies. Here, sociodemographic data of the study sample are compared to national averages (year 2009) to assess its representativeness. **RESULTS:** The demographic structure (by age and gender) of the Nordbaden sample (including its vdek subgroup) compares well to the national population. However, regional population density is much higher (396/sqkm versus 229/sqkm in 2009), and GDP per capita (34,800€ versus 29,300€) as well as the rate of persons insured by private sick funds (instead of SHI: 18.2% versus 14.6%) exceed the national average. There are also relatively more health care specialists in Nordbaden (for example, 11,400 persons per mental health care specialist and 3,200 per psychotherapist) compared to Germany (17,200 and 3,900, respectively), whereas the relative number of general practitioners is somewhat lower (with 1,500 persons per g.p. versus 1,400). **CONCLUSIONS:** The Nordbaden sample constitutes a well-characterized study population. However, interpretation of observations should take into account the well-documented differences between region and nation.

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## THE OTC POLICY IN EUROPE AND GREECE

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**OBJECTIVES:** To analyse the policies implemented for the pricing, promotion and classification of over-the-counter (OTC) drugs, in several European countries and to compare them with those in Greece. **METHODS:** The study presents in detail the structure of the prescription drug (Rx) and OTC market and the prevailing corresponding policies in 23 European countries. The data used in the study were mainly derived from the published literature and were synthesized and categorized with emphasis on the classification process, pricing, reimbursement and promotion of Rx and OTC. The above process was used to reveal and highlight commonalities and differences between the countries. **RESULTS:** It was found that the great majority of European countries apply free pricing for OTC drugs and only few countries choose state intervention. The 21 out of the 23 countries allow the OTC market to self regulate through the mechanisms of the market and competition and the main exclusion is Greece, which is one of the two countries, from those examined, which the government regulates the prices of OTC drugs. This policy initially was intended to protect consumers from excessive pricing and overconsumption of

widely used drugs but has opposite results. In terms of the content, the analysis indicates that the positive and negative lists are wider in the case of Greece and the OTC list is narrower compared with the remaining countries. **CONCLUSIONS:** International experience indicates that the OTC list in Greece is narrower and heavily regulated in terms of price relative to other countries. This may lead to opposite results that those intended by budget holders. Careful expansion of the OTC list along with release of their prices, may lead to savings for the public spending and greater access to patients at reasonable cost and a patient level.

## PHP84

## THE ECONOMIC HEALTH VALUE FROM RX TO OTC SWITCH IN GREECE

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**OBJECTIVES:** To estimate the economic impact of switching established prescription drugs (Rx) to over-the-counter drugs (OTC), for different stakeholders (patients, social insurance funds, the national economy, physicians). **METHODS:** An algorithm was constructed to estimate the percentage of drugs that could be transferred from the positive and the negative list to the OTC one, based on data obtained from the OTC lists of 24 countries in Europe. In the algorithm, it was assumed that a drug could be transferred in the OTC list in Greece if it was included in the corresponding list of at least seven other European countries. Based on this approach, it was calculated that 4.3% and 40% of drugs belong to the reimbursement and negative list, respectively, could be shifted to the OTC list. The economic impact of the switch was estimated based on the reduction of medical visits, the change of drug prices, the chance of copayments, the reduction in transportation costs and the increase of patient productivity. The analysis was stochastic. **RESULTS:** In the base case scenario, the total annual savings for the social funds is estimated at 170€ million and the benefit for the economy at 78,96€ million. Patients are charged with extra 95€ million for drugs. It is estimated that the switch reduces the number of medical visits by 1,8 million and saves 1,28 million days of work. An increase of individual per capital expenditure by 9.4€ due to switch to OTC drugs could benefit by 249€ million to the national economy. These results were confirmed in two additional scenarios. **CONCLUSIONS:** The findings of this study suggest that the Rx-to-OTC switch may reduce the health care costs of social security funds and may benefit the national economy overall, with some reasonable extra costs incurred by patients on an individual basis.

## PHP85

## THE BENEFITS OF USING OTC: A SYSTEMATIC LITERATURE REVIEW

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**OBJECTIVES:** Greece goes through a major economic crisis and a reform program, in the context of which an aim is to cut by half drug spending within four years. Expansion of the over-the-counter (OTC) drug list could contribute to the reduction of public spending. Hence, a review was undertaken to investigate the implications of expanding their use. **METHODS:** Relevant published studies examining the effect of using OTC drugs were identified with search in MEDLINE, EBSO and PUBMED. The literature search was based on the following terms: Over the counter, OTC, drugs, prescription medicine, Rx, Non Rx, benefit, economic impact, self-care. Studies were included based on the following criteria: peer-reviewed English-language articles, published from 2000 and over, cited at least in 25 other articles. The selected studies were divided into three groups based on the stakeholder for whom the study had been conducted. **RESULTS:** For patients, the shift of drugs from prescription to OTC status leads to increased access, greater utilization, reduced traveling cost and physician payments, increases in productivity and drug expenditure. The switch reduces public spending on drugs and physician visits. However, the expansion of the OTC list may in certain cases be associated with risks and negative effects on health outcomes, if patients are not well informed regarding the ways of responsible self-medication. Finally, the literature review revealed that patients are more likely to prefer a, more expensive, prescription drug from a cheaper but similar in effectiveness non-prescription one if both are available. **CONCLUSIONS:** It is evident that the greater use of OTC drugs may improve access, convenience, service, health outcomes and patient satisfaction and may reduce the expenditures of social insurance, under certain well controlled and designed circumstances. In particular the drugs need to be carefully selected and the patients and pharmacists well informed and trained on responsible self-medication.

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## COST-EFFECTIVENESS IN HEALTH CARE PROGRAMS: A LITERATURE REVIEW

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**OBJECTIVES:** Aging population, chronic conditions and financial constraints are among the main challenges for our health care organization. Disease management programs and multidisciplinary teams are often proposed as possible solutions but, while cost effectiveness (CE) is well accepted and almost evident in the evaluation of drugs and technologies, it is not sure that it is also common use in the implementation of new health care programs. **METHODS:** In December 2011 we conducted a search for publications since 2000, in Pubmed, Cinahl, Econlit and Biomed Central, with "care program" or "disease management program" or "rehabilitation program" as mesh terms. To identify in how many cases generic health-related quality of life (HR-QoL) questionnaires were used, the search was extended